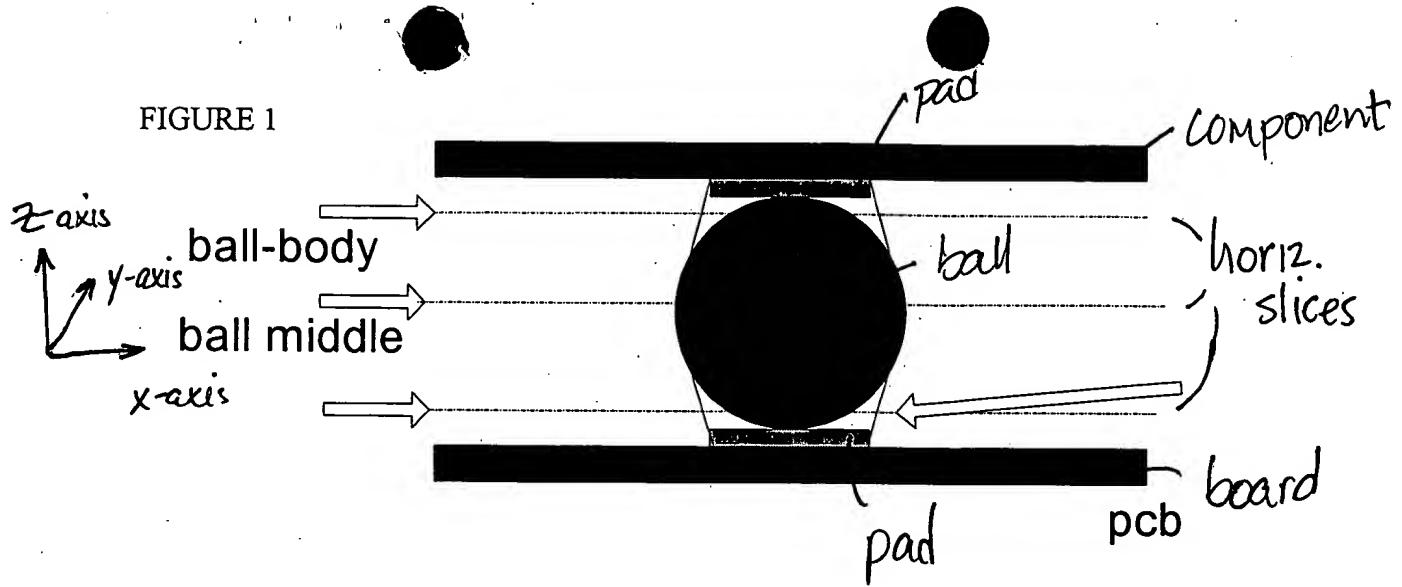


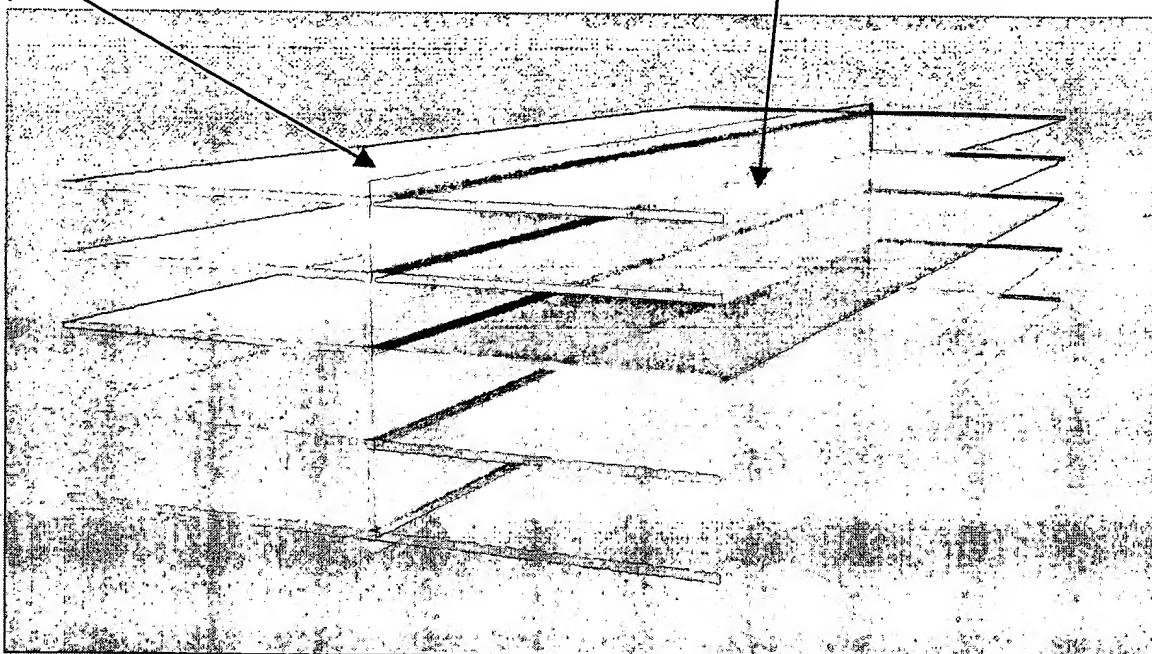
FIGURE 1



A bga ball showing the pad, ball and fillet

Vertical Slice

Horizontal Slices



5

FIGURE 2

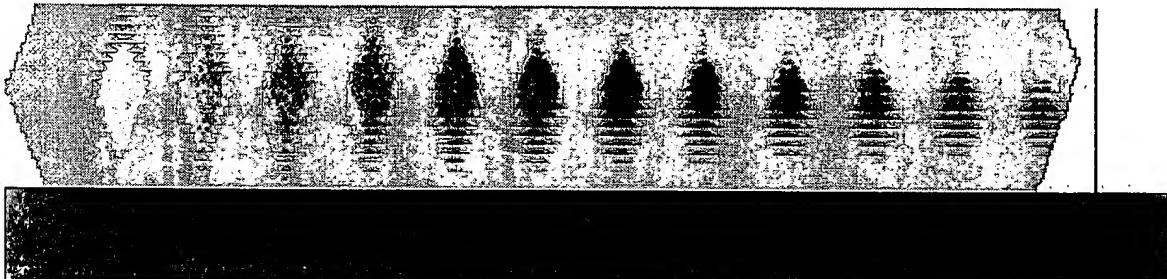
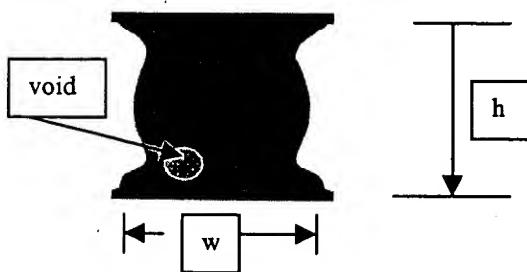


FIGURE 3

FIGURE 4



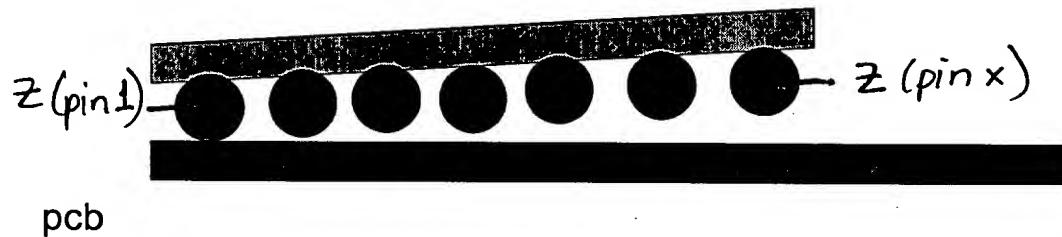
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10

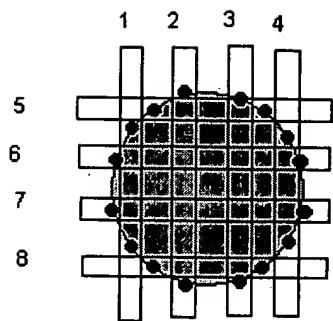
FIGURE 5

tilted bga



Tilted BGA example

FIGURE 6



09303709-110700

DO NOT INDEXED

START

START

ACQUIRE DATA CORRESPONDING TO A NUMBER OF HORIZONTAL SLICE IMAGES

DEFINE A VERTICAL REGION OF INTEREST FROM THE DATA

CONSTRUCT A VERTICAL SLICE IMAGE BASES UPON DATA FALLING WITHIN THE VERTICAL REGION OF INTEREST.

ANALYZE THE VERTICAL SLICE IMAGE TO DETERMINE WHETHER A DEFECT IS PRESENT

END

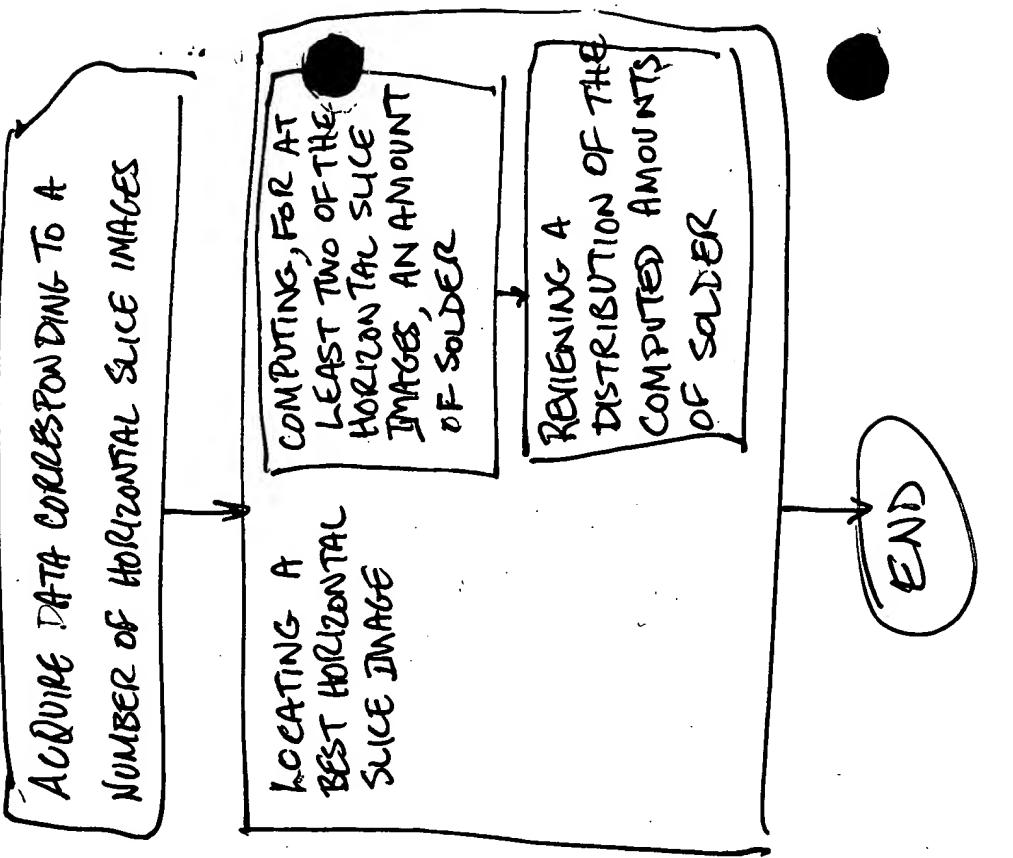


Fig. 7

Fig. 8

~~DO NOT FORGET~~

START

**FINDING A LOCATION OF
THE JOINT**

**IMPROVING THE LOCATION
BY APPLYING A FINE
LOCATOR**

**MEASURING A PLURALITY OF
DIAMETERS THROUGH THE IMPROVED
LOCATION AT A NUMBER OF
ANGLES**

**APPLYING A RULE THAT COMPARES
THE MEASURED DIAMETERS TO
AN EXPECTED DIAMETER**

END

Fig. 9